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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/516,958	01/11/2005	Andreas Martin	DECLE34.002APC	8574

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EXAMINER	
SACKEY, EBENEZER O	
ART UNIT	PAPER NUMBER
1624	

NOTIFICATION DATE	DELIVERY MODE
03/21/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/516,958	MARTIN ET AL.	
	Examiner	Art Unit	
	EBENEZER SACKEY	1624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 November 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25,30 and 31* is/are pending in the application.

4a) Of the above claim(s) *25,31 and 51* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14 and 30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *12/03/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Status of the Claims

Claims 1-25 and 30-31 are pending.

Specification

The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Response to Restriction

Applicant's election without traverse of Group I, claims 1-14 and 30 in the reply filed on 11/02/07 is acknowledged.

Claims 15-25 and 31 are withdrawn from further consideration by the Examiner, 37 CFR 1.142(b), as being drawn to non-elected subject matter.

Information Disclosure Statement

Receipt of the Information Disclosure Statement filed on 12/03/04 is acknowledged and has been entered into the file. A signed copy of the 1449 is attached herewith.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 10-11 and 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 10-11 recite the limitation "$V_1P_aM_bAi_cO_x$ or $V_1P_aM_bTi_cO_x$ catalyst" in line 1. There is insufficient antecedent basis for this limitation in the claims because the catalyst system of claim 1 is totally different from the one in claim 10.

Regarding claim13, the phrase "or the like" renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "or the like"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).

Claim Rejections - 35 U.S.C. § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. The factual inquiries set forth in Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

a. Claims 1-14 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayami et al., (EP 141 228) in view of Huang et al., Ammoxidation of 2, 6-dichlorotoluene On Silica Supported Vanadium-Phosphorus Oxide Catalyst, Chinese Journal Of Catalysis, Vol. 20 No. 6, November 1999.

Applicants claim a method for preparing halogenated benzonitriles by vapor phase ammoxidation of halogenated C_{1-6} alkyl benzenes, in the presence of water vapor at temperatures of between 300 and 500^0 C, in the presence of VPO in a fixed bed reactor.

Determination of the scope and content of the prior art (MPEP §2141.01)

Hayami et al., teach the preparation of 2, 6-dichlorobenzonitrile by ammoxidation of 2, 6-dichlorotoluene in the vapor phase in the presence of an ammoxidation catalyst in a fixed bed reactor. See the entire reference, especially pages 3-5 and Example 1.

Huang et al., teach the preparation of halogenated nitriles by ammoxidizing 2, 6-dochlorotoluene in the presence of promoted VPO catalyst and water. See the entire publication.

Ascertainment of the difference between the prior art and the claims (MPEP §2141.02)

The instant method differs from Hayami et al., in that oxygen and ammonia is present in the gas component used in the Hayami et al., preparation. However, Haung et al., teach that it is not necessary to use oxygen and ammonia during the ammoxidation of 2, 6-dichlorotoluene in the presence of a promoted VPO catalyst at process temperatures between 300 and 500^0 C. See the first paragraph of Huang et al., on page 2/3.
It is noted that claims 7-9 requires specific catalyst carries such as Al_2O_3, TiO_2 and anatase (TiO_2), Hayami teaches that 2,6-dichlorotoluene can be ammoxidized in the presence of inert carriers such as titania, alumina or regardless of the catalyst system used (limitations of claims 12-13). See page 4, the last paragraph. It is further noted that claim 12 requires a ratio of 0.5 to 2.0 by weight of the inert medium. The specific

ratio limitation is not disclosed in any of the references. However, the use of a range of alternative ratios in a well known process (as ammoxidation) may be *prima facie obvious* since ratios are nothing more than the manipulation of process parameters to maximize yield and/or selectivity. In the absence of proof to the contrary, the ratio claimed is seen to be an obvious modification available to one of ordinary skill in the art. It is merely optimization of a variable, which is not a patentable distinction absent unexpected results due to this variable. *In re Aller*, 105 USPQ 233, (1955). Also see *In re Boesch*, 205 USPQ, 215, (1980). Note the catalysts of Example 15-21 on page 11 of Hayami embraces catalysts and limitations of claims 10 and 11. None of the references teaches residence time of 8 seconds (claim 30). However, such a limitation is considered a potential optimization of a reaction condition. *In re Aller supra* and KSR 82 USPQ .2d 1385 (2007).

Finding of prima facie obviousness---rational and motivation (MPEP §2142-2143)

Accordingly, at the time of filing this application, it would have been *prima facie obvious* to one of ordinary skill in the art to prepare 2, 6-dihalogenobenzonitrile as disclosed by Hayami et al., guided by the disclosures of Huang et al., with a reasonable expectation that the resulting product would be pure because Hayami et al., discloses that any requisite catalyst can be used in the preparation of 2, 6-diclorobenzonitrile. See page 3. Hence, one in possession of Hayami et al., guided by the disclosure of Huang et al., is in possession of the instant process absent a showing of unexpected results or properties. The reaction that is being claimed is a predictable and expected reaction. Thus, the use of VPO catalyst in the instant process per say is uninventive and hence, *prima facie obvious*.

Accordingly, the instantly claimed process would therefore have been suggested to one of ordinary skill in the art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to E. Sackey whose telephone number is (571) 272-0704. The examiner can normally be reached on Monday-Friday from 7:30 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James O. Wilson, can be reached on (571) 272-0661. The fax phone number for this Group is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-1600.

EOS

/James O. Wilson/
Supervisory Patent Examiner, Art Unit 1624